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ABSTRACT

Reports prepared by the Louisiana State University (LSU) Libraries Task Force on Electronic Services examine the present level of automated services at the LSU libraries and make recommendations for both long- and short-term plans to handle information in electronic format. The reports, each of which is followed by a list of recommendations, focus on the following LSU automated services: (1) NOTIS (an integrated, automated library system which will provide access to all cataloged, ordered, and in-process material in the library); (2) online services; (3) the Research Libraries Group (RLG); (4) OCLC; (5) use of microcomputers in the library; (6) in-house searchable computerized bibliographic systems; and (7) electronic information in other campus locations. It is concluded that coordination and cooperation are essential to making the most effective and efficient use of electronic capabilities. Four appendices include: "Evaluation of Online Services," which includes a user evaluation form; "Accounting and Billing: Electronic Information"; a listing of electronic equipment available in LSU libraries; and a listing of electronic information on the LSU campus. (KM)

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ELECTRONIC INFORMATION SERVICES

LOUISIANA STATE UNIVERSITY LIBRARIES

A REPORT

PREPARED BY THE TASK FORCE ON ELECTRONIC INFORMATION SERVICES

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INTRODUCTION

This report on electronic information services at LSU Libraries has been prepared by the Task Force on Electronic Services in response to the charge to examine the present level of automated services at the LSU Libraries and to make recommendations for both long and short range plans to deal with information in electronic format. The Task Force has been meeting on a regular basis since last October. In the discussions that took place two overriding themes emerged : 1) The traditional concept of the library as a repository for printed forms of materials with traditional means of access has changed as a result of new technology, and 2) LSU Libraries must join in the electronic information revolution in order to survive as a viable institution. The ease with which the Library can adapt to new technologies is contingent upon a number of factors. At a time when funding is critical in the state, having to invest in new technologies which are costly creates problems. However, if the Library is to play a vital role in the research mission of the University, such an investment is essential. For librarians and library users accustomed to traditional library services the transition to an electronic library may be difficult. The training of librarians and users must be a part of any changes that result from technological innovations in the LSU Libraries.

One problem arising from attempting to formulate a plan for dealing with information in electronic format is that there is no clear picture of what the future holds. Our only certainty at this point is that we are in the midst of an information revolution. We do not have much choice about our role in this revolution:

> Libraries are at a critical point in their history. They have tremendous investments in their existing collections, catalog card files, and manual procedures. But society will not wait for libraries to accommodate themselves gradually to the changing world of computer technology. The 'information age' is here to stay, and libraries must join the mainstream of progress or find themselves slowly eddying around in a backwash of antiquated products and services.[1]

It will take planning combined with a willingness to adapt in order to assure that new technologies are successfully integrated into LSU Libraries' services. This report is intended to create some priorities for dealing with electronic informa-

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[1] Emily Gallup Fayen , The Online Catalog: Improving Public Access to Library Materials (White Plains, N.Y.: Knowledge Industry, 1983), 1.

tion. The present level of automated services were examined in separate reports compiled by Committee members. The recommendations at the conclusion of each of these reports reflects the Committee's priorities for strengthening these services. We would define "short range" plans as those which should be addressed in the next two years in order to maintain the level of service which the Committee considers desirable. "Long range" recommendations should be enacted over the next three to five years.

NOTIS

NOTIS is an integrated, automated library system which will provide access to all cataloged, ordered, and in-process materials in the library. The system will include automation in the areas of public access, cataloging, acquisitions, circulation, and serials control. At the present time and into the near future, the course which the LSU Libraries will follow with regard to NOTIS has pretty much been charted. The tapes are loaded, the first installment of equipment has arrived, the staff has been trained and the public access catalog is about to be unveiled. The next two years will be spent in modifying and upgrading the system. If the promise of the NOTIS technology is realized, the LSU Library will be electronically accessible. This will not happen until all the subsystems are online and all of the library's holdings are included in the public catalog including the pre-1976 records, government documents, and archives and manuscripts.

RECOMMENDATIONS

Short Range

1. Complete the addition of all the subsystems to NOTIS: circulation, acquisitions, and serials control.

2. Provide training and publicity to assure the full utilization of LOLA (the public access catalog).

3. Provide more terminals to meet the demands of staff and public.

4. Provide printers in select locations.

5. Provide for campus wide access by making dial-up access available for faculty.

6. Complete retrospective conversion in order to get the pre-1976 holdings online.

7. Add the government documents holdings to NOTIS system.

8. Add other databases which reflect LSU Library holdings such as the Landmark Series or services presently provided by the library such as online bibliographic services.

Long Range

1. Provide campus-wide access by making dial-up service available for all users on campus.

2. Add the archives and manuscripts holdings to NOTIS.

3. Continuously monitor enhancements to NOTIS and incorporate these into LSU's NOTIS program.

ONLINE SERVICES

LSU Libraries began offering computerized literature searching in 1977. The online literature searches provide access to bibliographic as well as text and numerical databases in a wide range of subject areas. The service is available to faculty, students, and non-university personnel on a fee basis. There has been a tremendous growth in the use of online literature searches since the inception of the service in 1977. In 1977-78, 330 subject/database searches were run; in 1984-85, 998 subject searches in 1826 databases were conducted.[2] This growth is not unexpected in the light of the revolution that has taken place in the information industry as a result of developments in the utilization of computers for information handling. It is estimated that the distribution of database services which was a billion dollar business in 1981 would increase ten times that by 1994.[3] While the traditional means of access to information (searching printed indexes and abstracts and other print sources of information) are still viable in the libraries of today, we must be prepared to deal with the revolution in the information industry. This report seeks to identify the current level of online services at the LSU Libraries and to prepare to meet the challenges of a service that is not only growing but also changing.

When online search services were instituted at LSU, a council was established to coordinate the services. This council, the Bibliographic Literature Search Service (BLISS), was made up of those librarians who were involved with online searching. The Head of Central Reference served as the coordinator of BLISS. Originally, all accounting and record keeping for search services were handled through BLISS. During its first year of operation, the service included three vendors: DIALOG, SDC, and Medline. Searching was conducted by librarians in the Central Reference Department, Business Administration/Government Documents Department, and the Chemistry Library. The BLISS council became inactive around 1983, but the Central Reference Department has continued to administer what is known as the BLISS service. This includes the accounting and record keeping for the majority of the services. In the fall of 1984, the BA/Docs Department instituted a service with BRS AfterDark and began keeping its own accounts and records. At the present time, spring 1986, online searching is conducted by librarians in the Central Reference Department, BA/Docs. Department, and the Chemistry

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[2] In 1977-78 searches were counted by database only.

[3] "Online Database Revenues Predicted at $10 Billion by 1994," Bulletin of the American Society for Information Science April 1984: 6.

Library. Following is a general assessment of the present level of support for online services.

Facilities. The first BLISS facility was a room located in the basement of Middleton Library. All searching was conducted in this location except that for Chemistry Library. During renovations to the library, the search room changed locations several times. With the completion of the move in Middleton Library in 1985, the Central Reference Department and the BA/Docs. Department each acquired a room or a special space dedicated to online searching and other computer applications.

Equipment. In 1977, the librarians began searching on a 300 baud Texas Instrument terminal. There were two terminals, one in the Chemistry Library, and one in Middleton. The following equipment is presently available and being used for online searching:

Central Reference Department:
  IBM PC XT
  Apple IIe

BA/Docs Dept
  IBM PC (on loan from Disclosure, Inc.)
  Lear Sigler terminal

Chemistry Library
  IBM PC XT

Both the Central Reference Department and the BA/Docs Department are experiencing heavy demand on existing computers. The Central Reference Department does not have a computer dedicated exclusively to online searching so searchers must compete with other users in the Department for online time. Although the BA/Docs Department has a dedicated terminal, it does not have a computer for other applications, since the present computer is being used with a CD player. Computers are needed in both Departments to take care of the current workload.

Staff. The impact on staff time for online searching has been considerable. It has been estimated that each search takes an average of one hour including time for the interview and pre-search preparations, online time, and record keeping. The increase in online searching has resulted in a greater demand on the reference librarian's time. Although the number of searches has increased approximately five-fold, there has not been a corresponding increase in the number of librarians conducting searches. In 1977-78 there were eight librarians conducting online searching; today there are nine. In addition to the time spent by librarians conducting searches, the Library Associate in

the Central Reference Department and the Typist/Clerk in the BA/Docs. Department spend about 35 and four hours per week respectively on accounting, record keeping,and acquisition and maintenance of search aids.

Databases. In the early days of online searching at LSU Libraries, searching was confined, for the most part, to bibliographic databases. The counterparts of these databases were usually available in printed form. In the few years since the advent of online searching, the character of the information available online has changed almost as drastically as the number of databases. In addition to bibliographic databases the searcher now has available full text databases, directory information, and numeric information. Although the preponderance of searches conducted at the LSU Libraries continues to be bibliographic in nature, we are finding that the demand for non-bibliographic information is growing. Currently the library has access to the following vendor systems:

BRS
BRS AfterDark
BRS Brkthru
CASSIS (U.S. Patent and Trademark Office database)
CIS- Chemical Information System
Datatimes (Baton Rouge newspapers and others)
DIALOG
Dunsprint
Medline (NLM)
NASA/Recon
Pergamon Infoline
STN-CAS, Physics Briefs, Mathematics, etc.
Wilsonline

Training. Librarians who received their library degrees before the 1980's had, as a general rule, no training for online searching. The first searchers attended vendor workshops and, in turn, trained others. Even though librarians joining the faculty have had some training, it is often necessary to provide practice time as well as refresher courses. An on-going training program is needed to keep current with recent developments.

RECOMMENDATIONS

Short Range

1. Appoint a coordinator for online services. (See report submitted in March 1986, Appendix A.)

2. Centralize all accounting for online services.(See Appendix B.)

3. Provide for evaluation of services and searchers.(See Appendix A.)

4. Provide equipment presently needed to take care of current workload.

5. Assess equipment needed to keep pace with new technology, for example 2400 baud telecommunications and digital transmission.

6. Conduct a study of the volume of online services anticipated in the next three years in order to determine staff and equipment needs.

7. Provide for training of new staff and on-going training for current searchers.

8. Continue to develop programs for end-user training.

9. Investigate the possibility of the library's providing central accounting for end-user passwords.

10. Identify the availability of other databases in order to meet the needs of the University community.

11. Identify and study the feasibility of gateway services through OCLC and RLIN.

Long Range

1. Formulate a plan that will address funding needed for online reference services, including additional staff, equipment, and training.

2. Make online services an integral part of the collection development plans of the library. That is, consideration should be given to reallocation of funds so that funds might be dedicated to search services in lieu of print sources. A collection Development policy should be written that would incorporate this possibility.

3. Allocate funds to expand the ready reference online.

RESEARCH LIBRARIES GROUP (RLG)

The Research Libraries Group, Inc. (RLG) is a corporation owned by major universities and research institutions. Its stated goals are:

> "to provide research institutions a structure through which common problems can be addressed,
>
> to provide scholars and researchers with sophisticated access to bibliographic and other forms of information,
>
> to enable libraries to manage their catalogs in an automated mode and in the context of an automated union file of all member collections,
>
> to promote, develop, and operate cooperative programs in collection development, preservation of library materials, and shared access to research materials".(RLG in Brief, December, 1984)

SERVICE TO THE LIBRARY

RLG operates and offers four principal programs. They are: Collection Management and Development; Shared Resources (interlibrary lending and on cite access to member library collections); Preservation; and Technical Systems and Bibliographic Control.

The RLIN automated information system is used to support these programs. It allows online access to member libraries collections and archival materials. It also provides access to Avery Index to Architectural Periodicals, index to art sales catalogs (SCIPIO), and the ESTC Project. Because RLIN provides sophisticated searching capabilities including Boolean subject searching, it broadens the library's access to the system.

EQUIPMENT

The equipment needed presently to access RLG/RLIN is RLIN's terminal or a modified PC. For immediate needs the library is acquiring two terminals for reference and archives. For long range and future use of the system, additional terminals or access points must be provided in Interlibrary Loan, Cataloging, and Collection Development. RLG is also investigating using telefax equipment for rapid document delivery. LSU currently has a telefax machine.

EDUCATION - TRAINING - USE STUDIES

The RLG support system provides all the training and manuals necessary to access the system. After in-house training of library staff, it is the member library's responsibility to provide training for public use. The protocols for searching RLIN were designed with the public in mind. As a result, searching the database techniques can be taught in a very short time.

The RLG support system also provides continual access to resource sharing statistics, collection development, and reference services.

WORKFLOW

There is no question that RLG will impact the library's workflow pattern. The most immediate example is in interlibrary loan where priority processing is given to RLG requests. Future workflow patterns will have to be established as the system is more fully utilized.

COST

Cost information is not available at this time; however, for the present, searching costs and interlibrary loan use of the system is approximately the same as OCLC/SOLINET.

RECOMMENDATIONS

Short Range

1. LSU's short range plans for utilization of RLG/RLIN are in the areas of Resource Sharing and Archival Management and should be governed by the needs of the University community. Faculty and graduate students should be made aware of the service in order to fully utilize its services.

2. Terminals will be provided in Central Reference and Archives. Later terminals should be placed in BA/DOCS, Inter-library Loan, Collection Development and Technical Services.

3. Initially RLG training staff will provide the necessary training, after which Central Reference should provide end user training for searching the RLIN database.

4. Interlibrary Loan service should use the ILL subsystem for resource sharing and for improved service in Interlibrary Loan.

5. The Conspectus Online should be used to evaluate the collection.

Long Range

1. Maintain continuity of ownership.

2. Long range plans would probably include the loading of our own catalog records into the RLIN database as well as continued use of established RLG services.

3. Since RLG management has decided not to offer any programs other than those listed, the future emphasis at the LSU Libraries should be on refining the systems to take advantage of technological change.

4. Monitor the Linked Systems Project, which would provide gateway access to the other principal systems such as OCLC, WLN, and Library of Congress (DLC).

5. The RLG Collection Management Program with its Conspectus Online will have immediate and long term impact on collection development. The most immediate effect will be the limiting of "scatter collecting." A collection development policy based on in-depth subject coverage should be adopted in order to limit "scatter collecting" and to promote shared collections with other members.

OCLC

OCLC services in the LSU Libraries are obtained through subscription to SOLINET. Charges are generally by month, but there is a 2-cent surcharge for holdings displays, and a 6-cent "threshold" charge for search keys entered in the Online Union catalog (threshold charges may be offset by credits for records produced, ILL requests filled, etc.).

Services to the library: Cataloging (including Serials Cataloging, etc.)

1. Editing records from the Online Union Catalog directly for use in cataloging LSU library materials.

2. Using OUC workforms and information in Name Authority File to facilitate original cataloging of LSU library materials.

3. Ordering catalog cards directly from OCLC.

4. Ordering OCLC tapes for creation of NOTIS catalog.

5. Using OCLC tapes and other materials, through SOLINET, for retrospective conversion of pre-1975 catalog records.

Services above are used by technical services staff and trainees.

Services to the library: Acquisitions (including serials)

1. Searching OUC to verify information on y-slips.

2. Searching OUC to resolve discrepancies between information on y-slips and information on item itself.

3. Searching OUC to verify LSU holdings for some items before ordering.

4. Searching OUC to determine whether a requested item is part of a larger work or series.

Services above are used by acquisitions staff.

Services to library patrons: Reference

1. Searching OUC to verify, correct, and complete citations.

2. Searching OUC to find information on unknown items,

using "mock subject search," contents statements on series or collected works, tracings for previous editions under a different title, etc.

3. Searching OUC to construct personal and corporate bibliographies.

4. Searching OUC to find special information about items: LC subject headings, classification number, other control numbers, whether or not item is a government publication, series title, etc.

5. Searching Name Authority File to find special information about an author (personal or corporate): correct and variant forms of name, birth and death dates, etc.

6. Searching OUC to determine LSU holdings of items not found in the card catalog (new items, items with missing or misfiled cards).

7. Searching OUC to determine holdings of other libraries.

8. Searching the Name-Address Directory to provide names and addresses of information organizations.

9. Searching ILL Subsystem to determine progress of ILL requests.

The services above are provided for patrons at the reference desk by reference staff and trainees, on request and free of charge.

Services to library patrons and patrons of other libraries: Interlibrary Loan

1. Processing loan requests through the ILL Subsystem for current graduate students and current and retired faculty. Charge of $1 for complete handling procedure if item is found (other incurred charges passed along to patron).

2. Responding to loan requests processed through ILL Subsystem by other libraries. Charges vary.

Services above are provided by ILL staff and trainees, in response to written and electronic requests.

Projected changes: The Oxford Project

The Oxford Project is intended to enhance the basic services already provided by OCLC. It is to be completed in two phases.

Phase I, to be finished by early 1987, will allow access to the OUC by subject heading, classification number, and exact text terms, and provide new qualifiers, Boolean capabilities, a save file for searches, and a new Subject Authority file, and enhance the existing Name authority File and Name-Address Directory. Phase II, slated for early 1988, will enhance the ILL Subsystem. While the services currently provided through OCLC will be greatly enhanced in scope and efficiency by the Oxford Project, it does not seem likely that any entirely new services will be added, except for the addition of subject bibliographies to the personal and corporate ones.

Gateway Services

OCLC provides "gateway" services to BRS for its member libraries. Access to other major online vendors is being considered. Gateway service enables searchers and (possibly) patrons to search vendors through OCLC terminals, thereby bypassing telecommunication services such as TELENET and TYMNET. It remains to be seen whether the savings in telecommunications costs will be offset by added OCLC charges or by searching delays. In any case, OCLC functions only as a communication and logon service; once in a vendor's system, the protocols are the same.

RECOMMENDATIONS

Short Range

1. Cease ordering cards from OCLC when NOTIS downloading feature comes up (with the possible exception of shelf-list cards).

2. Prepare staff in acquisitions and automated processes to download OCLC records into NOTIS; prepare workflows for this procedure.

3. Train staff on Oxford project enhancements. Training may come from OCLC, SOLINET, in-house, or a combination thereof.

4. Establish a policy for training new staff on OCLC, particularly staff without previous training on OCLC.

5. Investigate the cost advantages and disadvantages (and workflow advantages and disadvantages) of searching DIALOG, BRS, etc. through OCLC "gateway" services. If searching through OCLC is deemed advantageous, establish policy for "gateway" use and train staff procedures (the latter should not take long). Use of OCLC as a "gateway" may need to be incorporated into other policy statements, such as end-user searching, staff training, etc.

6. Examine effect of RLG membership on need for OCLC in ILL. Possibly reorganize ILL workflow to accommodate change in role of OCLC (if any).

7. Establish guidelines for reference staff use of OCLC vis a vis NOTIS and RLN for determining materials holdings for LSU libraries and other libraries.

Long Range

1. Cease ordering tapes from OCLC, through SOLINET, when recon project is finished.

2. Update searching manuals when the Oxford Project is completed.

USE OF MICROCOMPUTERS IN THE LIBRARY

While the use of microcomputers in libraries is still new, the Library would appear to have at least made a start in incorporating microcomputers into its daily operations. Microcomputers are currently being used in most departments for a variety of applications such as word processing, online searching, database management, inter-library loan, record keeping, and accounting. At this point, it would appear that the demand for microcomputers exceeds the availability. (See Appendix C for a list of equipment currently available in LSU Libraries.) The possibilities for using microcomputers in libraries seems to be endless at this point. Not even the lack of software seems to be a deterrent anymore, as the inventive librarian can now create programs that are suitable to library needs.

RECOMMENDATIONS

Short Range

1. Standardize the hardware acquired in order to facilitate the crossover of experience.

2. Provide access to computers with word processing and management information software to every department.

3. Standardize software to facilitate the transfer of management of information and the preparation of reports within the library. For example, the HEGIS statistics could be entered onto a spreadsheet in each department, verified once only, and manipulated and re-formatted without re-keying the data. This type of transmittal saves time and increases accuracy.

4. Explore the possibility for site licensing in order to have sufficient copies of software to facilitate crossover use.

5. Inventory software and hardware in the Library and set up archival program for software.

6. Establish in-house or inexpensive training for effective use of microcomputers.

7. Establish resource positions staffed by student assistants with expertise in microcomputers, software, and programing.

Long Range

1. Set-up true networking of existing compatible hardware in order to use more efficiently the equipment and personnel available.
2. Keep current with technology especially applications for management information systems and electronic mail services.

IN-HOUSE SEARCHABLE COMPUTERIZED BIBLIOGRAPHIC SYSTEMS

Currently Middleton Library subscribes to InfoTrac (which includes LegalTrac and Government Publications Index) and CD-Disclosure. Both replace, in part, databases that have previously been accessed elsewhere. Both systems are on laser disk with additional hardware and software needed to access the information.

Currently available commercially or scheduled for 1986 release are:

Subsets of COMPENDEX (Engineering)
Subsets of NTIS (Government reports)
Subsets of Chemical Abstracts (Chemical engineering)
Subsets of INSPEC (Electrical Engineering)
PsyLit (Psychological Abstracts)
ERIC (Education)
PAIS (Social Science)
EMBASE (Medical not currently received)
LISA (Library and Information Science)
Dissertation Abstracts
AV Online (NICEM)

The above are produced by six different vendors and the software and equipment needed are not compatible. Except in the case of ERIC and Dissertation Abstracts they would not replace existing paper copies of indexes. Prices range from $800.00/yr. without hardware to $8500.00/yr. including hardware. The problem arises from the fact that most of these databases are currently accessible on a cost recovery basis.

All of this has implications for budgeting and collection development. The question of whether the library replace cost recovery searching with in-house searchable CD-ROM and absorb the additional costs can only be answered by administrative policy decision and examination of each purchase in the light of collection development policies. Do we really need another electrical engineering index or are current paper and cost recovery searchable indexes sufficient for the level of use? There are also additional costs to be taken into consideration with CD-ROM such as printers, paper, ink, ribbon, and repairs.

The two current systems, InfoTrac and CD-Disclosure are good purchases in that they allow access to undergraduates who are not users of cost recovery searching (InfoTrac) or replace currently existing subscription services (CD-Disclosure).

The laser disk industry is currently in a state of flux. There are no agreed upon standards for searching or recording on disks and this results in a proliferation of non-compatible

hardware and software. The industry is working on standards which would allow the operation of "juke box" type readers that could access a number of different laser disks with one reader and access station, this development should greatly lower the costs to consumers.

RECOMMENDATIONS

Short Range

1. Set up criteria for purchase of material in electronic format such as laser disks. Considering the fact that new developments could make any current acquisitions obsolete the Library should spend cautiously on new CD-ROM systems making sure that they are really important to the collection. The criteria used to support the acquisition of InfoTrac and CD-Disclosure seem to be useful measures. Other criteria would involve capability with NOTIS.

2. Keep current with new technologies and whenever practical participate in testing and evaluating of these new technologies and services.

3. Explore the possibility of acquiring additional funding from academic departments that now use a high volume of cost recovery searching which could be replaced by an in-house searchable system.

4. Explore possibilities for grants or other means of funding new technologies.

Long Range

There is no realistic method of projecting five years into the future. Annual assessments would be advisable in order to keep track of the technological innovations and costs which could make these systems more attractive to the library. Laser disk technology is in its infancy. The Library should monitor its growth and acquire those systems which fit into the mission of the library, using criteria based on sound collection development policies.

ELECTRONIC INFORMATION IN OTHER CAMPUS LOCATIONS

The focus of this report is on the electronic information system of the entire campus. This system can be divided into two areas: 1)(a) electronic information sources created on campus, (b) electronic information sources created off campus and acquired for campus use, and 2) electronic information sources not located on campus, but which are accessed under university authorization.

Using this description as a guideline, a survey was conducted to determine the electronic information usage by the campus community. The survey focused on the key players who were identified through the "Louisiana Data Locator Guide For State And Local Officials," and referrals. These key players were then queried, both in person and by phone, about their perceived role in the campus electronic information system.

Using the results of the survey several interesting conclusions can be drawn:

1) There is a wide range of information available spanning bibliographic, full-text, and numeric databases. These databases are accessed by users both on and off campus.

2) The majority of the databases are ongoing projects.

3) The listed databases (Appendix D) complement the services available at Middleton.

4) The list (Appendix D) should be used as an indicator of databases available on campus rather than as the definitive list.

5) A survey with a broader coverage needs to be undertaken, one which seeks a response from every department on campus. Experience suggests that this survey be conducted at an administrative level to ensure the highest return rate possible, to promote cooperation, and to enhance accuracy.

RECOMMENDATIONS

Short Range

1. Construct a questionnaire which could be sent to all departments on campus, ascertaining needs and usage of electronic information.

2. Compile a referral directory of the electronic information sources available, both on and off campus, which are

provided through university funding and are essentially available to the university community.

3. Provide end-user training on those systems for which there is demand and staff expertise.

4. Develop a collection of public domain software, drawing from university wide donations. New acquisitions could be added by charging a user fee for borrowing.

5. Organize E.I. training seminars for the campus community.

Long Range

1. Coordinate electronic information access for the entire campus, thus allowing cost discounts based on bulk searching.

2. Redefine the policies of the Library to include more cooperation with the computer center (SNCC).

3. Create and promote, at a campus wide level, profit making databases for non-university clients.

CONCLUSION

There is no doubt, based on the preceding reports, that LSU Libraries have embarked on a course that is set clearly in the direction of an electronic library. The difficulty of setting goals for such a course, even short range ones, is compounded by the fact that no one knows quite what shape the electronic library will take. There are too many unknowns to be able to make precise projections. However, some very obvious needs did emerge from the Task Force's discussions. The Task Force treated the various aspects of electronic services in the library in separate reports. This was necessary because of the disparate character of electronic services. That is, electronic information embodies a number of aspects, many of which would appear to be superficially autonomous. A closer examination of functions, however, reveals a relationship and a crossover that tie all electronic information functions together. For example, word processing is a separate function from online searching, yet each utilizes common skills common equipment, etc. With the advent of gateway systems and sophisticated communications carriers other functions will also be linked.

In order to make the most effective and efficient use of electronic capabilities, coordination and cooperation are essential. All electronic information should be coordinated through the Office of the Coordinator for Automated Systems. This does not in any way imply that the remainder of the library staff should not be involved with electric information. Rather, every staff member should be involved in being a part of the quest toward an electronic library. In an earlier report (Appendix A) the Task Force recommended that a coordinator be appointed for online search services. The Task Force sees this as a vital step toward strengthening that service. The Coordinator for Online Search Services should work closely with the Coordinator for Automated Systems to assure the most effective search services. In the same manner, persons involved in collection development should consider electronic information as one more format for information, but they should look to the Coordinator as a sort of clearinghouse for handling the information. For example, someone should be in charge of equipment requests necessary to access information in this format. The Coordinator for Automated Systems would serve in this capacity.

As the components of an electronic library are unraveled, it will take imagination, coupled with studied reasoning, to make certain that we not become a gadget waste basket. It is important that we keep in mind that any decisions about electronic information be guided by whether or not the information mission of the library is truly enhanced by electronic services and formats.

The recommendations which appear in the separate sections of this report are appended here for easy reference.

RECOMMENDATIONS

NOTIS

Short Range

1. Complete the addition of all the subsystems to NOTIS: circulation, acquisitions, and serials control.

2. Provide training and publicity to assure the full utilization of LOLA (the public access catalog).

3. Provide more terminals to meet the demands of staff and public.

4. Provide printers in select locations.

5. Provide for campus wide access by making dial-up access available for faculty.

6. Complete retrospective conversion in order to get the pre-1976 holdings online.

7. Add the government documents holdings to NOTIS system.

8. Add other databases which reflect LSU Library holdings such as the Landmark Series or services presently provided by the library such as online bibliographic services.

Long Range

1. Provide campus-wide access by making dial-up service available for all users on campus.

2. Add the archives and manuscripts holdings to NOTIS.

3. Continuously monitor enhancements to NOTIS and incorporate these into LSU's NOTIS program.

ONLINE SERVICES

Short Range

1. Appoint a coordinator for online services. (See report submitted in March 1986, Appendix A.)

2. Centralize all accounting for online services.(See Appendix B.)

3. Provide for evaluation of services and searchers.(See Appendix A.)

4. Provide equipment presently needed to take care of current workload.

5. Assess equipment needed to keep pace with new technology, for example 2400 baud telecommunications and digital transmission.

6. Conduct a study of the volume of online services anticipated in the next three years in order to determine staff and equipment needs.

7. Provide for training of new staff and on-going training for current searchers. (See Appendix A.)

8. Continue to develop programs for end-user training.

9. Investigate the possibility of the library's providing central accounting for end-user passwords.

10. Identify the availability of other databases in order to meet the needs of the University community.

11. Identify and study the feasibility of gateway services through OCLC and RLIN.

Long Range

1. Formulate a plan that will address funding needed for online reference services, including additional staff, equipment, and training.

2. Make online services an integral part of the collection development plans of the library. That is, consideration should be given to reallocation of funds so that funds might be dedicated to search services in lieu of print sources. A collection Development policy should be written that would incorporate this possibility.

3. Allocate funds to expand the ready reference online.

RESEARCH LIBRARY GROUP (RLG)

Short Range

1. LSU's short rang plans for utilization of RLG/RLIN are in the areas of Resource Sharing and Archival Management and should be governed by the needs of the University community. Faculty and graduate students should be made aware of the service in order to fully utilize its services.

2. Terminals will be provided in Central Reference and Archives. Later terminals should be placed in BA/DOCS, Inter-library Loan, Collection Development and Technical Services.

3. Initially RLG training staff will provide the necessary training, after which Central Reference should provide end user training for searching the RLIN database.

4. Interlibrary Loan service should use the ILL subsystem for resource sharing and for improved service in Interlibrary Loan.

5. The Conspectus Online should be used to evaluate the collect--ion.

Long Range

1. Maintain continuity of ownership.

2. Long range plans would probably include the loading of our own catalog records into the RLIN database as well as continued use of established RLG services.

3. Since RLG management has decided not to offer any programs other than those listed, the future emphasis at the LSU Libraries should be on refining the systems to take advantage of technological change.

4. Monitor the Linked Systems Project, which would provide gateway access to the other principal systems such as OCLC, WLN, and Library of Congress (DLC).

5. The RLG Collection Management Program with its Conspectus Online will have immediate and long term impact on collection development. The most immediate effect will be the limiting of "scatter collecting." A collection development policy based on in-depth subject coverage should be adopted in order to limit "scatter collecting" and to promote shared collections with other members.

OCLC

Short Range

1. Cease ordering cards from OCLC when NOTIS downloading feature comes up (with the possible exception of shelf-list cards).

2. Prepare staff in acquisitions and automated processes to download OCLC records into NOTIS; prepare workflows for this procedure.

3. Train staff on Oxford project enhancements. Training may come from OCLC, SOLINET, in-house, or a combination thereof.

4. Establish a policy for training new staff on OCLC, particularly staff without previous training on OCLC.

5. Investigate the cost advantages and disadvantages (and workflow advantages and disadvantages) of searching DIALOG, BRS, etc. through OCLC "gateway" services. If searching through OCLC is deemed advantageous, establish policy for "gateway" use and train staff procedures (the latter should not take long). Use of OCLC as a "gateway" may need to be incorporated into other policy statements, such as end-user searching, staff training, etc.

6. Examine effect of RLG membership on need for OCLC in ILL. Possibly reorganize ILL workflow to accommodate change in role of OCLC (if any).

7. Establish guidelines for reference staff use of OCLC vis a vis NOTIS and RLN for determining materials holdings for LSU libraries and other libraries.

Long Range

1. Cease ordering tapes from OCLC, through SOLINET, when recon project is finished.

2. Update searching manuals when the Oxford Project is completed.

USE OF MICROCOMPUTERS IN THE LIBRARY

Short Range

1. Standardize the hardware acquired in order to facilitate the crossover of experience.

2. Provide access to computers with word processing and management information software to every department.

3. Standardize software to facilitate the transfer of management of information and the preparation of reports within the library. For example, the HEGIS statistics could be entered onto a spreadsheet in each department, verified once only, and manipulated and re-formatted without re-keying the data. This type of transmittal saves time and increases accuracy.

4. Explore the possibility for site licensing in order to have sufficient copies of software to facilitate crossover use.

5. Inventory software and hardware in the Library and set up archival program for software.

6. Establish in-house or inexpensive training for effective use of microcomputers.

7. Establish resource positions staffed by student assistants with expertise in microcomputers, software, and programming.

Long Range

1. Set-up true networking of existing compatible hardware in order to use more efficiently the equipment and personnel available.

2. Keep current with technology especially applications for management information systems and electronic mail services.

IN-HOUSE SEARCHABLE COMPUTERIZED BIBLIOGRAPHIC SYSTEMS

RECOMMENDATIONS

Short Range

1. Set up criteria for purchase of material in electronic format such as laser disks. Considering the fact that new developments could make any current acquisitions obsolete the Library should spend cautiously on new CD-ROM systems making sure that they are really important to the collection. The criteria used to support the acquisition of InfoTrac and CD-Disclosure seem to be useful measures. Other criteria would involve capability with NOTIS.

2. Keep current with new technologies and whenever practical participate in testing and evaluating of these new technologies and services.

3. Explore the possibility of acquiring additional funding from academic departments that now use a high volume of cost recovery searching which could be replaced by an in-house searchable system.

4. Explore possibilities for grants or other means of funding new technologies.

Long Range

There is no realistic method of projecting five years into the future. Annual assessments would be advisable in order to keep track of the technological innovations and costs which could make these systems more attractive to the library. Laser disk technology is in its infancy. The Library should monitor its growth and acquire those systems which fit into the mission of the library, using criteria based on sound collection development policies.

ELECTRONIC INFORMATION IN OTHER CAMPUS LOCATIONS

Short Range

1. Construct a questionnaire which could be sent to all departments on campus, ascertaining needs and usage of electronic information.

2. Compile a referral directory of the electronic information sources available, both on and off campus, which are provided through university funding and are essentially available to the university community.

3. Provide end-user training on those systems for which there is demand and staff expertise.

4. Develop a collection of public domain software, drawing from university wide donations. New acquisitions could be added by charging a user fee for borrowing.

5. Organize E.I. training seminars for the campus community.

Long Range

1. Coordinate electronic information access for the entire campus, thus allowing cost discounts based on bulk searching.

2. Redefine the policies of the Library to include more cooperation with the computer center (SNCC).

3. Create and promote, at a campus wide level, profit making databases for non-university clients.

APPENDIX A

EVALUATION OF ONLINE SEARCH SERVICES

One of the charges of the Task Force on Electronic Information is to develop mechanisms for evaluating online searches. This evaluation is necessary to promote efficiency and effectiveness, thereby maintaining a quality search service. This report will outline in detail procedures to be followed in implementing these mechanisms.

The most recent attempt to propose mechanisms for evaluating the search service was the "Committee on BLISS Searching Standards and Evaluation Report 1984."

This report examined three areas:

1) patron evaluation
2) self evaluation
3) peer evaluation

According to this report all three areas were rejected for formal search service evaluations, due to various reasons. Peer review, however, was seen as being a possible informal mechanism.

The present report seeks to define and examine searches in two evaluative components:

1) user/service evaluation
2) searcher/supervisor evaluation

Above all else it should be understood that the evaluations are a necessary means to measure the quality of the service and to enable the growth of the service in a systematic manner.

USER/SERVICE EVALUATION

The purpose of an online search according to Doris B. Marshall, "is to satisfy the patron, not match subjects to requests." Granted, this may stretch the public service role of the online searcher , but it should not be overlooked that the searcher is performing in the interest of the user. The user conversely is the only one qualified to judge the worth of the information received. If the information does not meet the user's needs then the search was not successful and a response is needed to indicate when and where the search failed. This is important in order to modify and improve the service. The

Middleton Library
Louisiana State University

BLISS SEARCH SERVICE
USER EVALUATION

In order to improve the BLISS service please take a few moments to fill out this evaluation and drop it into the campus mail.

I. STATUS
____FAC ____STAFF ____GRAD ____Undergrad ____Other

II. How many times have you used the BLISS SERVICE? _____

III. What type of search did you have done?

___ 1. To assure no previous work done?
___ 2. General literature review?
___ 3. Thesis or dissertation research?
____4. A few articles on specific subject?
____5. Other?_____

IV. Please check the appropriate column for the following statements:

	AGREE 1	2	3	4	DISAGREE 5
1. The time elapsed from search request to receipt of citations was reasonable.					
2. The results were worth the cost.					
3. The search saved me time in obtaining references.					
4. I would use this service again.					

V. What % of the citations were useful to you in your research?

___10% ___25% ___50% ___75% ___90%

VI. What % of the citations were previously unknown to you?

___10% ___25% ___50% ___75% ___90%

VII. ADDITIONAL COMMENTS: Your suggestions are welcome for improving our services.

is important in order to modify and improve the service. The user is the reason that the service is available and any growth can be attributable to this vital link.

It is recommended that an evaluation form, similar in content to the one developed by the Machine-Assisted Reference Services Section of the Reference and Adult Services Division of ALA (see Appendix A) be used. This form should address the key points of:

1) quantity of information sought
2) relevance or precision of information retrieved
3) efficiency of turnaround time (request-delivery)
4) costs of service
5) time saved online vs. manual search
6) user satisfaction with this service
7) prior experience with this service
8) open-ended request for suggestions

The user/service evaluation form should be distributed periodically with the search results at the discretion of the search coordinator. Anonymity of searcher and user should be maintained to encourage a fair response. The results of the user/service evaluations should be compiled and analyzed. This data should indicate problems with the service and suggest improvements.

SEARCHER/SUPERVISOR EVALUATION

Appraisal of searchers should be conducted differently from that of searches. Evaluation of searches should troubleshoot the service, and evaluations of searchers should be used as a means to instruct. Various goals and objectives should be assumed of all searchers. These goals and objectives should be formulated by consultation between the department supervisor and the searcher. The searcher goals should be included in the overall professional performance evaluation goals and weighted accordingly. For example, if a searcher spends 10% of his/her time with the online service, then searcher and supervisor should formulate goals which can be reasonably met within the allotted time period.

Following are eight areas of primary importance which should be used as guidelines in formulating searcher goals. These goals might include one or more of the these areas:

1) Professional responsibility
2) Question analysis/search strategy
3) Interaction online
4) Results of search process
5) Communication/interview skills
6) Knowledge of databases

7) Knowledge of vendor systems
8) Ability to work with equipment

The number of areas emphasized by a searcher would be determined by maintenance needs and performance needs dependent on level of expertise and on reasonable aspirations for improvement.

These eight primary areas should then be elaborated upon, focusing on objectives facilitating the successful completion of goals. The objectives should be written out and agreed upon by both searcher and supervisor. Following are standards for the primary areas, recommended as outlines in objective setting:

MINIMUM STANDARDS FOR INDEPENDENT SEARCHERS

1) Professional responsibility
   Understands the responsibility to the user. Keeps current with major literature sources available for updating knowledge and skills. Asks questions of more experienced searchers when necessary and participates in monthly meetings. Exercises proper judgement with respect to confidentiality of the search request.

2) Question analysis/search strategy
   Demonstrates the ability to break a search down into its component parts and relate the concepts in an effective, efficient manner. Recognizes and creates a strategy flexible enough to be changed (if needed) without unnecessary cost to the user.

3) Interaction online
   Exhibits flexibility and ability to exploit success online. Does not lose control of the situation when things do not go as planned. Knows proper usage of commands such as "hold" and "temporary save" to deal with unusual or emergency situations.

4) Results of search process
   Can adequately interpret the search results to users. Regularly examines the final printout to see if the materials retrieved were relevant to the search question.

5) Communication/interview skills
   Conducts an efficient pre-search interview and elicits user's true needs. Can clearly explain the limitations of the search system and steer users to traditional sources if appropriate.

6) Knowledge of databases
   Exhibits knowledge of databases available in subject area assigned. Can generate synonyms; knows available thesauri and search aids and uses them.

7) Knowledge of vendor systems.
   Knowledge of at least one major vendor (DIALOG, BRS, etc.) and ability to use basic and advanced features of the systems. Able to use menu driven systems (AfterDark, BRKTHRU, etc.) for quick searches. Familiarity with vendor manuals.

8) Ability to work with equipment
   Exhibits knowledge of the operation of the machines available for searching (IBM, Lear-Siegler, Eagle, etc.) and the software currently available. Is able to change paper in the printer, download (if available), logon using the major telecommunication carriers. Is aware of the special features of software (macros, download, editing, etc.).

An evaluation period should be determined at the time of the goal and objective setting. The searcher evaluation (which would be a component of the searcher's overall professional performance evaluation goals) should measure the completion level of the searcher's goals. Measurement for the evaluation should be determined by the supervisor, employing quantitative analysis, qualitative analysis, or some combination of both. Reliance on either one or both methods would be dependent on the goals set and the objectives initiated to reach the goals. Whichever method is used, the final result should point to areas of improvement and skill maintenance which will enhance the searcher as well as the overall service.

Following are eleven key data points that should be routinely collected from the search request form, the search log, and the evaluation form. This data will be gathered primarily for accounting and management purposes. Such purposes would entail billing, budget analysis, public relations, staffing, purchasing, and trouble-shooting.

QUANTITATIVE ANALYSIS

1) date
2) searcher name
3) user
4) user status

5) department
6) account #
7) databases used
8) cost
9) time online
10) authorization #
11) problems/comments

A secondary function of the preceding data may be in providing information for searcher evaluations, as agreed upon by searcher and department supervisor. Following are four areas of information which could be used as indicators of departmental and searcher progress:

1) # of searches run
2) # of users served
3) average cost
4) # of databases used

QUALITATIVE ANALYSIS

These are the qualities and attributes towards which searchers should strive. Although not as easy to measure as the preceding data, they should be borne in mind when creating performance objectives.

Van Camp:
1) self-confidence
2) logical mind
3) people oriented
4) exploits success
5) knows subject area
6) goes beyond formal training
7) retentive memory
8) perseverance and patience
9) efficient work habits
10) shares knowledge

Dolan:
1) concept analysis
2) flexibility of thinking
3) ability to think in synonyms
4) anticipation of variant word forms and spellings
5) self-confidence

University of Michigan:
1) flexible thinking
2) logical thought sequence
3) problem solving ability
4) creative thinking

MANAGEMENT OF ONLINE SERVICES

ONLINE COORDINATOR

To enable the systematic growth of the search service, the committee recommends an online coordinator. The responsibilities of the coordinator would include the following:

1) assess the status and needs of the service
2) coordinate, gather, and analyze statistics generated by the service
3) follow through on corrective procedures
4) coordinate training, materials, accounting, and budget
5) be available to advise on evaluations
6) implement recommendations for policy changes
7) coordinate activities of online searcher's group

The coordinator must be an experienced searcher, one who has achieved the independent searcher level outlined elsewhere in this policy. Time spent in this position would entail approximately 25-50% of the coordinator's overall professional responsibilities. The coordinator will act in an interdepartmental capacity and be accountable to the Head of Public Service. Search service status and other reports will be produced periodically by the coordinator.

ONLINE SEARCHER'S GROUP

An online searcher's group should be formed to facilitate the learning process of the searchers providing the search service. It is recommended that meetings of this group be held on a regular basis, preferably monthly. Agenda for meetings will be the responsibility of the search coordinator. These meetings should be formal or informal as the need arises. Following are recommended purposes of the searcher's group:

1) analysis of successful searches
2) analysis of unsuccessful searches
3) database specific seminars
4) vendor specific seminars
5) investigation of practices and trends in the online literature
6) awareness and integration of search service subject areas
7) enhancement of interviewing and public relations skills
8) discussion of system updates
9) recommend search service policy changes

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APPENDIX B

ACCOUNTING AND BILLING :ELECTRONIC INFORMATION

At the present time bookkeeping and accounting for search services are handled in different departments and in different ways. BLISS accounting is handled by the Reference Department; BRS-Afterdark accounting is done both by Reference and BA/Docs using different forms. Both departments use numbered authorization forms and numbered cash receipts; logs are kept for gathering statistics and reconciling billings.

There are several different actions involved in the accounting process of the search services:

1. Bookkeeping
2. Preparing internal transfers
3. Taking in and recording cash transactions
4. Keeping statistics and generating reports
5. Reconciling bills with the other records

In order to streamline the system of accounting for electronic information systems in the library we need to assess each of the above for the possibility of speeding up, centralizing, or eliminating the item.

1. Bookkeeping - The University is in the process of automating its accounting system. The Library's Special Services Office is already monitoring the progress in order to assure that Library accounting is integrated into the new system. The Library accountant is best qualified to do centralized bookkeeping and internal transfers. The possibility is good that the University will soon automate all of these transactions.

2. Cash transactions - All cash transactions should be handled through one source. Ideally, this should be the Bursar's Office. This would eliminate entirely the need for library staff (and student trainees) to handle cash or give receipts.

3. Statistics and reports - Presently this takes up a lot of time for the individuals who have been assigned these tasks in the Reference Department and in the BA/Docs Department. As we expand electronic services the time spent in keeping statistics and reports will increase. We already have the means of automating a great deal of the statistical compilation and report generation using software such as LOTUS 1-2-3. However, the Library Administration and the Departments (Reference and BA/Docs) should evaluate the utility of the statistics before the software is programmed.

4. Record keeping - Another way to cut down on the amount of paperwork is to eliminate the separate numbered authorization, cash receipt, and log records. Other University Departments handle these items through the use of a multi-part numbered form. (See attached form from Media Production Center.) We need a three part form: 1) Authorization form, 2) receipt for the client, and 3) statistical record (would include log information). If cash transactions were to be handled through the Bursar's Office, one more form would be needed for their billing purposes.

5. Reconciling Bills - Since no major discrepancies have been found we recommend that reconciling bills be done on a random basis. As we add vendors and services, this practice will take an increasing amount of time for very little return.

RECOMMENDATIONS

The Task Force on Electronic Information studied the report which was submitted and made the following recommendations, recognizing that a University-wide accounting and billing service is sometime in the future.

1. Centralize bookkeeping in one department.
2. Centralize cash transactions in the library in an area which is open during the hours which the library is open.
3. Design one form which will serve as an authorization form and a log.
4. Review statistics collection and devise a program for automating statistics collection and report generation.

APPENDIX C

ELECTRONIC EQUIPMENT AVAILABLE IN LSU LIBRARIES

Microcomputers

IBM PC/RLIN	1
IBM XT	11
IBM AT	1
Apple II	1
Columbia	1
ITT XT	1
M300	5
NEC Starlet	2
Data/General/One	1
Eagle	1

Modems

1200 baud	10
300 baud (built-ins)	3

Printers

Telex 281B	4
Epson FX/Rx	4
Epson LO 1500	1
Okidata	4
Diablo	1
Lear Siegler	3
NEC	2
Proprinter	6
Printronix	1
General Electric	2
DG/One Printer	1
Riteman	1
Misc.	3

Terminals

Telex 277D	16	(on loan)
Telex 277D	1	
Telex 476L	16	
Telex 080	5	
IBM 3178	4	
OCLC 100/105	8	
Lear Siegler	1	
Qume	1	

Controllers

IBM 2271 + modem	1	(on loan)
IBM 3274	1	
Telex TC909 + modem	1	

Scanners

Symbol Technologies LaserScans 6320	4
Caere Light pen	2

Miscellaneous

Multi-function boards	2	
64K/265K memory boards	5	
Graphics board	1	
Smart Cables	2	
x-switches	7	
2-way switches	4	
InfoTrac system	5	terminals, 2 video players

APPENDIX D

ELECTRONIC INFORMATION ON THE LSU CAMPUS- A SURVEY

WETLAND INFORMATION REPOSITORY

1) CIR'S LOUISIANA DOCUMENT HOLDINGS

2) MISSISSIPPI DELTAIC PLAIN REGION BIBLIOGRAPHY

3) WETLAND VALUES FOR FISH BIBLIOGRAPHY

4) SEA GRANT LEGAL'S IN-HOUSE HOLDINGS

5) PONTCHARTRAIN BASIN BIBLIOGRAPHY

6) WIR'S MAP COLLECTION

7) WIR'S DATA TAPE HOLDINGS

8) LSU THESES ABOUT LOUISIANA 1970-1980

9) RICHARD RUSSEL GEOLOGICAL REPRINT INDEX

10) THE INFORMATION REPOSITORY'S CATALOG

COLLEGE OF BUSINESS ADMINISTRATION

11) LOUISIANA BUSINESS REVIEW DATABASE

12) COMPUSTAT DATA FILES (NOT COMPUSTAT II)

LOUISIANA AGRICULTURAL EXPERIMENT STATION

13) BRANCH STATION DATABASES

14) ENTOMOLOGY "COCKROACH" DATABASE

LOUISIANA COOPERATIVE EXTENSION SERVICE

15) FEDERAL ASSISTANCE PROGRAMS RETRIEVAL SYSTEM

CENTER FOR ENERGY STUDIES

16) LOUISIANA ENERGY INDICATORS

17) ENERGY RESEARCH DATABASE

18) DRILLING COST DATABASE

19) OIL AND GAS FIELDS DATABASE

20) CURRENT AWARENESS ONLINE CATALOG

HEBERT LAW CENTER

21) LEXIS

22) WESTLAW

23) SERIALS HOLDINGS DATABASE